## TO REPLACE OR NOT TO REPLACE: HISTORIC WINDOWS IN METRO NASHVILLE'S HISTORIC OVERLAYS

### Why Keep Old Windows?

Repairing and maintain existing windows maintains value and historic character, is environmentally responsible and can be much less expensive. Historic windows can be endlessly repaired whereas replacement windows have relatively short warranties and once the window fails, the entire sash must be replaced which creates an endless cycle of purchasing, replacing and sending materials to the landfill. Manufactures often offer lifetime warrantees but what they don't make clear is that 30% of the time, a replacement window will be replaced within 10 years. Many old windows are made of old growth wood that is denser and therefore longer lasting than wood available today.

### What About Energy Efficiency?

Multiple studies have shown that properly maintained windows with the addition of storm windows, particularly interior storm windows, can be as efficient as replacement windows, and also continue to maintain the integrity of a building's historic fenestration. While the exact figure will vary depending on the type of window installed and whether or not a storm window is used,

Wood Window Basics Using this 12-over-12, double-hung wood window as our example, here are the basic terms used for wood window parts. This window is called 12-over-12 because there are 12 panes of glass in each sash. Both sashes are moveable so it is Top Sash (upper section of wincalled double-hung. If only the bottom sash moves, it is called single-hung. dow, may slide down to open) Jamb (the wood that frames the window opening) Light/lite/pane (glass, held in place by glazing putty and metal glazing points) Rail (horizontal part of sash) Meeting Rail or Check Stile (vertical part of sash) Rail (the rail where the two sash come together) Bottom Sash (lower section of window, typically slides up to open) Muntin (horizontal, vertical, diago-Sill (exterior, horizontal piece at nal, or curved pieces that frame the bottom of the window frame and provide mounting surface for commonly wood, stone, or brick) the lights) The shape, or profile, of Stool (interior shelf-like board at the muntin provides a clue to the the bottom of a window against A c. 1846 wood window in the former Robwindow's age. which the bottom rail of the sash bins and Lawrence Armory, now the American Precision Museum in Windsor, VT. 1. Garvin (2002)

studies have found that it could take 100 years or more for a replacement window to pay for itself in energy savings. In addition, the majority of energy loss is through the roof so it may be more cost efficient to replace or increase attic insulation rather than replacing windows.

# What Should I Look for When Replacement is Necessary and for New Construction?

- Consider using a "sash pack" that retains both the original window casings, frame and sill, rather than full, costly, replacement of these elements.
- Use simulated divided lights (SDL) with spacer bar or no muntin grills. Bars should range between 5/8" to 1 1/4", depending on the style of the window.
- Use a mullion, to divide paired or triple windows. Mullion should be 4" to 6" in width as they are creating the appearance of an historic weight pocket.
- Windows used in walls with lap-siding or shingle siding may not use brick mould casings.
- Windows used in walls with brick or stone cladding, should use brick mould casings.
- When a casement-style window is required for a dormer to meet emergency egress requirements, but other similar dormers on the structure have
  double-hung windows, a new casement that incorporates an applied grill pattern mimicking double-hung sashes should be selected as these are readily
  available from multiple common manufacturers, are more compatible with the building's existing historic millwork, and fully meet applicable code
  requirements for secondary exit of a residential sleeping space. DH windows with 2 tilt sashes also meet emergency egress requirements.
- Storm windows should use blind-stops and have a meeting rail that lines up with the existing meeting rail.

What Windows Have Already Been Reviewed and Which Districts Are They Allowed To Be Used In?

This information is for planning purposes only and is not in any way exclusive. Replacement windows are not reviewed in Neighborhood Conservation Zoning Overlay Districts.

As new manufacturers and products are constantly emerging, additional design options, not included here, may also be submitted for a detailed review. This document does not represent an endorsement of any individual product or company.

Company / Model	All-wood option	Clad Option	Other Option	Pref. Ext. Muntin	HPZO Replacement Windows for Hist. Structures	HPZO or NCZO Windows Used in New Construction
American Craftsman			Vinyl		X	X
American Home Design			Vinyl		Х	X
Andersen / Series 100			Vinyl		X	X
Andersen / Woodwright			Composite	7/8", 1 1/4"	X	<b>✓</b>
A&S			Steel		✓ -appropriate for commercial designs and Tudor or Mid-Century modern	✓-appropriate for commercial designs and Tudor or Mid-Century modern
Champion			Vinyl		Х	X
Central Woodwork / Neverot			Composite	7/8", 1 1⁄4"	Х	<b>✓</b>
Enviroguard Series 100/200/300			Vinyl		Х	X
Hopes			Steel		<ul> <li>- appropriate for commercial designs and Tudor or Mid-Century modern</li> </ul>	✓ -appropriate for commercial designs and Tudor or Mid-Century modern
Hurd / Wood Double Hung	X	Aluminum	Composite	5/8, 1 1/4" putty-style	✓	<b>~</b>
Jeld-Wen / Custom Series	X	Aluminum	Copper	5/8, 1 1/8" putty-style	✓	~
Jeld-Wen / V-2500 Series					Х	X
Lowen	X	Aluminum		5/8, 1 1/8" putty-style	<b>✓</b>	~
Marvin / Ultimate	Х	Aluminum		5/8, 1 1/8" putty-style	<b>✓</b>	~
Marvin / Integrity			fiberglass	5/8, 1 1/8" putty-style	Х	~
MGM Industries "Southern Rose" / Series 8017 Vinyl (painted)			Vinyl	3/4"	Х	~
MGM Industries "Sienna" Vinyl					X	X
Monarch / Majestic	Х	Aluminum		7/8, 1 1/2"	~	~
Pella / Architect Series	X	Aluminum	fiberglass	7/8"	<b>✓</b>	<b>✓</b>
Pella / Proline (450 Series)		Aluminum		7/8"	Х	<b>✓</b>
Ply Gem / Pro Series 350			Vinyl	7/8"	Х	✓

Ply Gem / Pro Series 200			Composite	5/8, 1 1/4"	X	<b>✓</b>
Ply Gem / 1500 Vinyl Collection	Χ	Aluminum			X	X
Quaker	Χ	Aluminum		7/8"	X	<b>✓</b>
Reliabilt		Vinyl			X	X
Semco / Oakley Companies	X	Aluminum		7/8", 1 ¼" (SLD AND TDL)	X	<b>&gt;</b>
Sequel by HD/ DH Tilt		Aluminum		7/8"	<b>✓</b>	<b>✓</b>
St. Cloud Window Series 2500			Aluminum		✓-appropriate for some commercial designs	✓-appropriate for some commercial designs
Sierra Pacific – Premium and Designer series	Х	Aluminum	wood or vinyl	"Putty Profile"	<ul> <li>- All wood window appropriate for replacement</li> </ul>	✓ - wood, vinyl or alum clad options appropriate
Sierra Pacific-Builders Series					X	X
Sun Windows – Tilt DH		Aluminum			X	- Alum clad options appropriate for new const.
Torrance			Steel		- appropriate for commercial designs and Tudor or Mid-Century modern	-appropriate for commercial designs and Tudor or Mid-Century modern
Traco			Aluminum		<ul> <li>- appropriate for some mid-century commercial designs</li> </ul>	<ul> <li>-appropriate for some mid-century commercial designs</li> </ul>
Tucker 2300 Series		PVC	Vinyl	7/8", 1 1/8"	Х	<b>✓</b>
Tucker 2100 Series		Wood		7/8", 1 1/8"	<b>✓</b>	✓
Vintage Millwork / Custom	Х	Custom	Custom	5/8" true putty	<b>✓</b>	<b>✓</b>
Most Vinyl Windows (generic)			Vinyl		Х	X
Weather Shield / WS	Х	Fiberglass		5/8, 1 3/8" putty style	~	<b>~</b>
Window Craft	Х			•	<b>✓</b>	<b>✓</b>

HPZO = Historic Preservation and Landmark Zoning Overlays NCZO = Neighborhood Conservation Zoning Overlay and B&B Homestays

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**Inappropriate windows are not allowed due to material, design/construction details; such as heat/solvent-welded mitered corners, and vent/weep-holes in the sash frames, snap-in mutton grills, or the material does not allow for appropriate dimensions.	